

THE ADAPTATION OF THE STANDARD CLASSIFIED NOMENCLATURE OF DISEASE TO HOSPITAL MORBIDITY REPORTS*

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HOSPITAL-SICKNESS experience is of interest not only to the medical and administrative personnel of each particular institution, but also to the community at large. Whether it be for the particular purpose of a single institution or from the broader community viewpoint, it is the mass aspect of the material rather than the minutiae that is of importance. It is the mass aspect of the statistical approach that gives it validity, in contradistinction to the minutiae of each particular case which are the *sine qua non* of the individual clinical study. It is only from the study of bulk phenomena that certain tendencies or perspectives become discernible. Among the important deductions from the study by W. J. Mayo¹ of 10,280 operations performed at St. Mary's Hospital, Rochester, Minn., was the statement that "some deaths and many poor end results occur with a regularity so definite that their incidence can be foretold from year to year." Only individual case studies can prevent the recurrence of particular untoward events. Many years ago, Frederick L. Hoffman² of the Prudential Life Insurance Company, in a special monograph, outlined the many significant facts which can be obtained from hospital experience. This study was based on the statistical data of Johns Hopkins Hospital from 1892 to 1911.

The experience of a single hospital gains much in significance when compared with that of other similar institutions. To make such comparisons valid there must be some agreement between hospital authorities as to common fundamental categories and as to terms. From the outset it should be recognized that mass statistics of hospital experience are of no clinical value or, at best, very limited clinical value; that scientific statistical studies of selected clinical conditions have no place in a hospital report and are beyond the scope of morbidity statistics.

* Read March 1, 1940 at the National Conference on Medical Nomenclature, Chicago.

The compass of this paper precludes a detailed discussion of the value of morbidity statistics in general and of those of the hospitals in particular. This has been covered extensively in many other writings. The need of a systematic collection of morbidity data from various sources has, I believe, been well established.³ Granted that such body of information is needed for civic, biosocial, pathometric, demographic, and actuarial purposes, the question is how should such a body of information be obtained and systematized and what part hospital experience should play in it.

For the moment, it is the latter or the hospital experience that is of particular moment and that only in its nosological relationships. Because, however, of the extensive use that has been made of mortality statistics in the discussions of incidence of disease, it may not be amiss to emphasize that death statistics, even when they are based on accurate certifications, give only a partial account of illness, for in the published tabulations only the principal or final cause of death is recorded and the contributory causes are omitted. These contributory conditions are often of socially greater importance than the terminal cause. Furthermore, to base the knowledge of the prevalence of illness on mortality bills, is often misleading. Ratios between morbidity and mortality in each disease are never constant. These ratios change not only with the varying virulence of the causative organism, if the disease is of germ or virus etiology, but also with the age distribution of the population of a given community, the economic environment and the existence or non-existence of medical institutions and their adequacy or inadequacy. Hence, generalizing with regard to morbidity on the basis of mortality is hazardous and may be utterly misleading.

In the foregoing paragraphs an attempt has been made to emphasize the need for hospital morbidity statistics apart from mortality statistics, and to indicate that such statistics are of service to the hospitals themselves and to the community at large. Now, as to the *modus operandi*. The experience of the Peter Bent Brigham Hospital, the Mayo Clinic, the Johns Hopkins Hospital, and some other individual efforts, is no doubt of much value. So also is the experience of three attempts in New York City at collective gathering of hospital data. Other communities may likewise have attempted the pooling of hospital morbidity data; in that event the base of experience is still broader. The first demonstration of the kind was made in New York under the direction of the Hospital Information and Service Bureau of the United Hospital Fund in 1923 in

coöperation with six hospitals.⁴ In this experiment the simple method suggested by Bolduan⁵ was followed. The participating hospitals agreed to send certain information concerning their discharged patients, using a form of certificate agreed upon, and these certificates were edited by a medical registrar in the same way as death certificates are registered by a registrar of vital statistics. There was no uniformity in the manner in which diagnoses or other data were reported from the coöperating hospitals. The second study on a much larger scale was that undertaken under a large WPA grant by the Research Division of the Welfare Council of New York City. It covered the entire annual experience of 113 hospitals in 1933 and comprised data pertaining to approximately 576,000 patients.* Here again there was no uniformity in the reported facts and, as in the former study, a method of procedure had to be worked out to make possible a practical approach to the problem of classification. One of the valuable results of this experiment is the "Classified List of Diagnoses for Hospital Morbidity Reporting"⁶ published by the Welfare Council of New York City. This is based roughly upon the Standard Classified Nomenclature of Disease, although the arrangement of the group diagnoses followed the International List of Causes of Death as far as possible. The third experiment is that which has been carried on for the last ten years by the Division of Medical Records and Statistics of the Department of Hospitals since 1929, when all the municipal hospitals in the City were consolidated into one department. The work of that Division under Caroline Martin is no doubt the most outstanding contribution in the field of hospital morbidity statistics, due to the remarkable ingenuity and competence of its direction and because of the insignificant cost of the enterprise.

Only recently has the Standard Classified Nomenclature been introduced in all the municipal hospitals and this has, no doubt, simplified the task of the central statistical office. Irrespective of the number of group classifications into which an abridged list must be divided, it is easier to use the individual entries of the Standard Classified Nomenclature than those of any other list, first because they are precise, and second because the scientific system of nosology developed in the Standard list has gained widespread approval and will no doubt become universal in time. If it should be advantageous to correlate the groupings of combined entries with the International List of Causes of Death, a method of cross-

* This study has not been published as yet, except for a monograph describing the method used.

reference can be worked out which will serve the purpose. It is to be regretted that the Mayo Clinic Tabular Outline has been based entirely on the International Causes of Death, with such additions as were considered of importance from a pathometric or biosocial viewpoint.⁷ Some of the items in that list could be omitted with benefit. There is no need in a hospital morbidity list of special entries for torticollis or for menopause or cretinism or idiocy and many other conditions rarely encountered in general hospitals. Whenever possible, the use of eponyms in any list should be discouraged on general principles. The Welfare Council list, though much shorter than that of Mayo Clinic, provides entries for numerically important conditions which are lumped in the Mayo Clinic outline, such for example as detachment of retina, strabismus, ulcer of the cornea, and other diseases of the ophthalmic system. On the other hand, the shortcoming of the Welfare Council grouping lies in the fact that it follows neither the International List nor the Standard Classified Nomenclature. Only five of the groupings in that list are based on the principle of etiology; the others refer to symptomatology or anatomical site. This may have been due to the need for tabulating poorly recorded information. Until the Standard Classified Nomenclature becomes generally used, a compromise arrangement may have to be used. It should, however, be pragmatically useful and should be generally agreed upon, as otherwise no valid comparisons are possible.

The four considerations followed in the tabulation of the material by the Welfare Council of New York City should be critically reviewed and such changes suggested as may be most acceptable for general adoption. The four guiding principles in the arrangement of the material in the Welfare Council classification were:

1. Elimination of superfluous diagnostic notations. In the actual tabulation of the 576,000 hospital discharge records, a single diagnosis was chosen for 78 per cent of the cases, two diagnoses were entered in 17 per cent, three diagnoses in 4 per cent, and in only 1 per cent of the cases were four diagnoses tabulated.

2. The discarding of complicating conditions which accompany the major condition or of typically secondary conditions.

3. The placement of several manifestations of the same etiology under one diagnostic designation.

4. Elimination of accessory conditions which are accidental and have no relation to the disease for which the patient was hospitalized.⁸

Neither the Mayo Clinic nor the Welfare Council classification lists surgical operations. From an administrative as well as a social viewpoint it is desirable that hospital reports include a classification of operations, prepared in accordance with some uniform, agreed upon method. The one used by the Division of Records and Statistics in the Department of Hospitals of New York City has proved of practical usefulness.

There are numerous other tabulations of administrative value which should be prepared and correlated with the medical and surgical experience of the hospitals, such as: total days' stay; mortality, although this is always of questionable value; occupations; and seasonal cycle. These and other important items do not come perhaps within the purport of discussion of this particular conference. I wish, therefore, to conclude with emphasis on several points in relation to hospital morbidity statistics:

First, the value of such statistics to hospital administration, to demography, to community planning, and to social insurance.

Second, the desirability of a uniform classification of hospital morbidity and of surgical operations for comparative purposes.

Third, the recognition of the fact that mass hospital statistics are of limited value from a clinical viewpoint, and that they are scientific only when they are carefully prepared and correlated in accordance with certain agreed upon principles of sound statistical procedure.

Fourth, the availability of the Standard Classified Nomenclature is a factor in making such tabulations easily referable to accurate clinical entries and simplifies the work of coding.

Fifth, hospital morbidity statistics should be prepared in close conformity with the International List of Causes of Death, because of convenience and cross-reference.

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